

**Work Order ID 67956**

Tuesday, April 05, 2011 8:11:46 AM



Page 1

Item ID: D412-711-101

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Bubble Window

Start Date: 4/5/2011 Start Qty: 2.00



Cust Item ID:

Required Date: 4/8/2011 Req'd Qty: 2.00



Customer:

Reference:

Run Start

Approvals: Process Plan: *H*Date: *11-04-15*

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D412-711-101

A

100

0.00



DC

Document Control

Memo

Photocopy bluefiles and create labels  
for PPP D412-711-101 Change 002

0.00

*8/10/15**Der BG 11-4-19*

110

0.00



HandThermo

Hand Finishing Thermoforming

HAND FINISHING THERMOFORMING

Memo

Set up Machine as per folio FTA 077 and D711W program using mould DT9640

0.00

*x2**DL*  
*11/04/14*

120

0.00



HandThermo

Hand Finishing Thermoforming

HAND FINISHING THERMOFORMING

Memo

Cut Blanks to 36" by 39"

0.00

*x2**DL*  
*11/04/14*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Work Order ID 67956

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Item ID: D412-711-101

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Item Name: Replacement Bubble Window

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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130  Thermoform Thermoforming Machine	THERMOFORMING MACHINE  Memo Thermoform as per Dwg. D412-711-101 using DT 9640 and Folio FTA 077 <u>A</u> Dwg. Rev. <u>A</u> Folio Rev.	0.00  0.00				x2			DL 11/04/11
140  QC Quality Control	QC2- Inspect parts off machine FAI/FAIB  Memo 1) Check Surface finish for undesired marks, voids, dimples etc. 2) Check depth of bubble to ensure conformity to drawing tolerances.	0.00  0.00				x2			DL 11/04/11
150  QC Quality Control	QC8- Inspect parts - second check  Memo	0.00  0.00				11		04 12	(2)

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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**Work Order ID 67956**

Tuesday, April 05, 2011 8:11:46 AM

Page 3

Item ID: D412-711-101

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Setup Start

Revision ID:

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Item Name: Replacement Bubble Window

Start Date: 4/5/2011 Start Qty: 2.00

Cust Item ID:

Required Date: 4/8/2011 Req'd Qty: 2.00

Customer:

Reference:

Run Start

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160

0.00



HandThermo

HAND FINISHING THERMOFORMING

Memo

0.00

Hand Finishing Thermoforming

1) Trim off excess flange material  
2) Buff out any light scratches or  
3) Etch part number and batch number

x2

11/04/18

170

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

1) Visually inspect for clarity, and proper formation.

x2

11/04/18

180

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

1) Visually inspect for clarity, and proper formation.

x2

Subulcs

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 67956

Tuesday, April 05, 2011 8:11:46 AM



Page 4

Item ID: D412-711-101

Accept



Setup Start



Revision ID:

Item Name: Replacement Bubble Window

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Start Date: 4/5/2011 Start Qty: 2.00



Cust Item ID:

Required Date: 4/8/2011 Req'd Qty: 2.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

185

QC4- 100% Inspect kits for completeness

0.00

8/4/19

82



QC

Memo

0.00

Quality Control

190

Identify as per dwg & Stock Location

0.00

Reoc

11/4/19



Packaging

Memo

0.00

Packaging

200

QC21- Final Inspection - Work Order Release

0.00

11/4/19



QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Tuesday, April 05, 2011 8:11:52 AM

Page 1

Work Order ID: 67956



Parent Item: D412-711-101



Parent Item Name: Replacement Bubble Window

Start Date: 4/5/2011


Required Date: 4/8/2011

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A New Issue 06-02-01 JLM  
Manufacture in-house 10/06/28 DL

IPP Rev. B.

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MACRLICS.236  Plexiglass G .236"		Purchased	No				sf	80.0000		42.66667			

Location

therm

Loc Qty

80

Loc Code

80

116030

42.66667 sq ft

DL  
11/04/18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 67956
<b>Description:</b> Replacement Window		<b>Part Number:</b> D412-711-101
<b>Inspection Dwg:</b> D412-711-101 <b>Rev:</b> A		<b>Page 1 of 1</b>

**FIRST ARTICLE INSPECTION CHECKLIST**  
**THERMOFORMING SECTION**

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than <u>N/A</u>	✓			
Shape Definition	✓			
Texture Retention	✓			
Material imperfections such as bumps, cracks, voids, scratching	✓			

<b>Measured by:</b> <u>W.H.</u>	<b>Date:</b> 11/04/11
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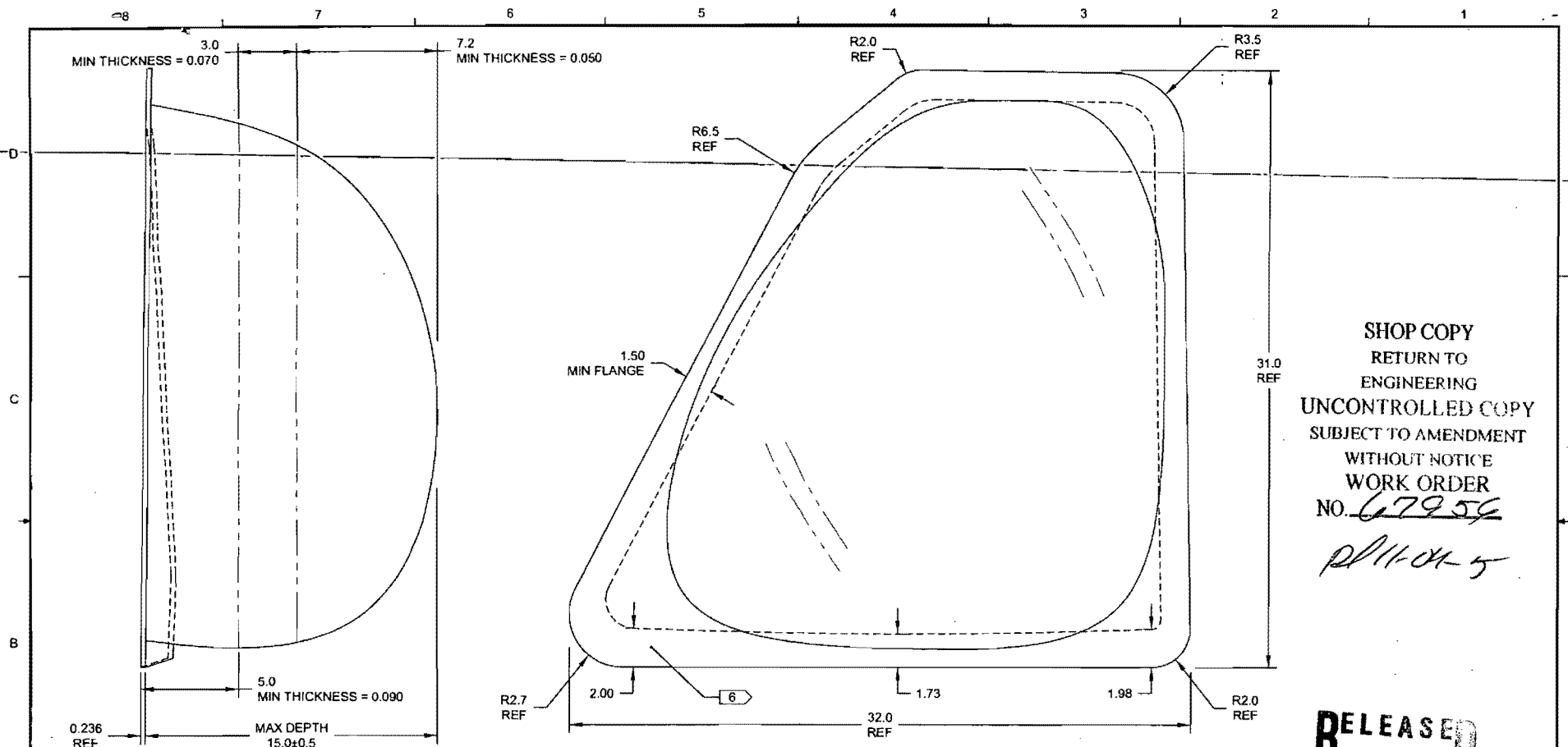
**TRIMMING SECTION**

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
2.00	+/-0.030	2.00"	✓		Visual DL-02	
1.73	+/-0.030	1.75"	✓		Visual DL-02	
1.98	+/-0.030	1.99"	✓		Visual DL-02	
1.50	Min	1.54	✓		Visual DL-02	
0.090	Min	1.094	✓		ULTRA	
0.070	Min	1.03"	✓		ULTRA	
0.050	Min	0.60"	✓		ULTRA	
15.0	+/-0.5	15.25"	✓		TAPE DL-01	

<b>Measured by:</b> <u>D.H.</u>	<b>Date:</b> 11/04/18
<b>Audited by:</b> <u>G</u>	<b>Date:</b> 11/04/18
<b>Preliminary Approval:</b>	<b>Date:</b>

Rev	Date	Change	Revised by	Approved
B	10.10.08	New Issue	KJ	





SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 67956  
*PLH-04-5*

RELEASED  
2010-06-30  
*MP*

# **D412-711-101 REPLACEMENT WINDOW**

## **NOTES:**

- 1) MATERIAL: PLEXIGLAS G CLEAR CAST ACRYLIC SHEET PER LP-391 TYPE 1 GRADE C  
OR POLYCAST II CLEAR ACRYLIC SHEET PER MIL-P-5425,  
0.236 THICK (STOCK, REF. DART SPEC. M-ACRYLIC-S.236)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE P/N "D412-711-101" & B/N "BXXXXX" ON THE INSIDE SURFACE  
OF THE BUBBLE WINDOW FLANGE, WITHIN 0.25" OF BUBBLE. USE 0.125" LETTERS TO MAX. DEPTH OF 0.005"
- 7) WEIGHT: 8.0 lbs
- 8) VACUUM FORMING: PER FOLIO FTA077 USING DT9640 MOLD AND DART QSI 022

REV.	DESCRIPTION	BY	DATE
A	NEW ISSUE	MB	10.06.28
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.06.28		

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D412-711-101** REV. A  
SHEET 1 OF 1

TITLE **REPLACEMENT WINDOW** SCALE  
NTS

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WRITTEN PERMISSION FROM DART AEROSPACE LTD.

W/O:		WORK ORDER CHANGES					
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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